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Idaho National Laboratory

Creating the Foundation and Organizational Climate for a Strong Nuclear Safety Culture

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Advanced Test Reactor Programs

Introduction: Back to the Future

- "A problem cannot be solved until it is transmitted to and acknowledged at the organizational level where it can be properly addressed. Unfortunately there is a disposition common to all operating organizations to minimize the potential consequences of problems, especially when blame may attach to the reporter or when the solution may require higher level assistance. Facing up to difficulties, regularly informing higher levels of management of them, and determining and correcting their root causes involve attitudes and practices which are essential to operating competence."

Introduction: Back to the Future

- "Operating nuclear plants safely requires adherence to a total concept wherein all elements are recognized as important and each is constantly reinforced. Training, equipment maintenance, technical support, radiological control, and quality control are essential elements, but safety is achieved through integrating them effectively in operating decisions. Management's understanding of this principle at the corporate and plant levels is a valid measure of competence. The organizational structure gives some indication of management's awareness, but is less important than understanding and applying the principle."

Introduction: Back to the Future

- "Since we are dealing with persons and machines which cannot be made perfect, it is important to recognize that mistakes will be made. We must do our best to design machines having tolerance for mistakes and to continue to improve them through experience. This process of evolutionary improvement, the basis for much of our most useful technology, depends on a capacity to acknowledge mistakes and to determine and correct their underlying causes, whatever the cost. An inability or unwillingness to learn from experience is intolerable in nuclear operations"

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Introduction: Back to the Future

- "Excellence in operating nuclear power plants cannot be achieved merely by meeting a set of minimum standards. Excellence is achieved by raising standards and goals when lower thresholds of competence have been reached. It is necessary, of course, to define minimum requirements, particularly when evaluating eligibility for an operating license. However, the competence of nuclear operations management must be measured not only by success in reaching prescribed minimums but by its determination and success in exceeding them."

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Introduction: Back to the Future

- "It is incumbent on nuclear plant operators to minimize personnel radiation exposure by all reasonable means. A constant concern for the undesirable biological consequences of even small amounts of radiation and an insistence on reducing them are characteristics of a competent nuclear management. Since exposure levels allowed by regulations are seldom approached in practice, management's intent and ability to accomplish the purposes of the "As Low As Reasonably Attainable" (ALARA) program can be tested by examining its Radiological Control Program and the measures which it has adopted to minimize exposures."

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Back to the Future

Quotes taken from:

An Assessment of the GPU Nuclear Corporation
Organization and Senior Management
and
Its Competence to Operate TMI-1
by
Admiral H.G. Rickover, USN

19 November, 1983 (almost 30 years ago)

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The Challenges: Fundamental Understanding

- Making the Connections
  - Not flavor of the month or a change in what we should be doing
  - Really nothing new, some different terminology, same behaviors
  - Fits within DOE Integrated Safety Management (ISM) System
- The Business Case
  - Contractual Obligations
  - Return on Investment
- Education
  - Leadership – thinking, conversation, actions, awareness, monitoring
  - Workforce – make Nuclear Safety personal, recognize situations
- Focus on similarities vice differences
  - "We're Different" Understand the frame of reference
  - Do the behaviors make good sense in any situation?

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The Challenges: Integrating the Process

New DOE Cross Cutting Performance Areas for Cat 1,2,3, Nuc Facilities:

- Formality of Operations Programs. Includes evaluating effectiveness of the implementation of conduct of operations, conduct of maintenance, conduct of engineering, and conduct of training programs over a baseline period of time.
- Safety Culture. Includes developing, monitoring, and periodically evaluating the nuclear safety culture.
- Issue Identification and Resolution. Includes evaluating significance determination process and, for issues with high significance, ensuring that a rigorous evaluation and resolution process is effectively implemented.

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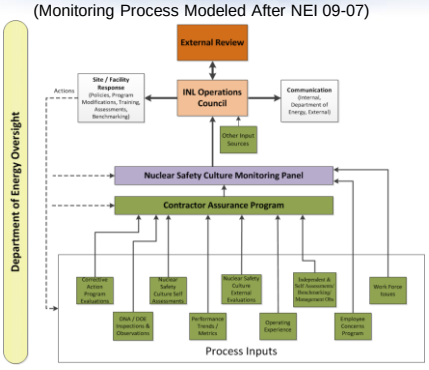
The Challenges: Integrating The Process (Core Business)

(Monitoring Process Modeled After NEI 09-07)



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The Journey

- Back to Basics
  - Not just what is allowable
  - What is the right thing to do?
- Educating Leaders
  - How to monitor Nuclear Safety Culture
  - Good Nuclear Safety increases production and ultimately lowers the cost of doing business
  - Unintended consequences of workforce perceptions
- Communicating the Message
  - Every leader
  - Every day
  - Every method possible
- Not forgetting the past, (Decision Making)
  - Innocent decisions in isolation can result in Nuclear Safety drift
  - Learning organization

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